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EXAMINER

LEE, SIN J

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

08/19/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. In view of the amendment, previous 112, second paragraph rejection on claims 38, 45 and 46 is hereby withdrawn.

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Claim Rejections - 35 USC § 102

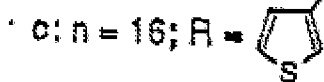
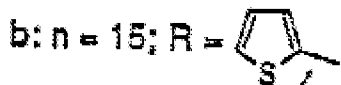
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 36-40 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Effenberger (US 2003/0035967 A1).

In Example 1, Effenberger coats a silicon surface with the following alkene compounds by brining together the silicon surface and the compounds such as 1b and 1c in a glass cuvette and irradiating for 20-24 hours in an inert gas atmosphere:



1a: $n = 15$; $R = CH_3$



By this procedure, a self-assembled monolayer was formed. Effenberger also teaches that a metallic surface containing Al can be used (see [0020]). Present claim 36 calls for a surface-modified layer system comprising a substrate having a surface and a self-assembled monolayer anchored to at least part of the surface, wherein the SAM is comprised by an aryl or rigid alicyclic moiety species in a substantially stable structural form (present claim 36 is a product-by-process claim). Thus, the end product of Effenberger's Example 1 teaches present claims 36-40 and 42.

5. Claims 36-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Rozsnyai et al ("Selective Electrochemical Deposition of Polyaniline via Photopatterning of a Monolayer-Modified Substrate", Journal of American Chemical Society, 1994, 116(3), pg.5993-5994).

The end product of Rozsnyai's Scheme I shows a gold (Au) substrate having a surface and a self-assembled monolayer anchored to the surface by a thiol moiety, and the SAM comprises aryl moieties (some of which are substituted by amino group) as well as C11 alkyl group. Since present claim 36 calls for a surface-modified layer system comprising a substrate having a surface and a self-assembled monolayer

anchored to at least part of the surface, wherein the SAM is comprised by an aryl or rigid alicyclic moiety species in a substantially stable structural form (present claim 36 is a product-by-process claim), Rozsnyai teaches present inventions of claims 36-44.

Allowable Subject Matter

6. Claims 45-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the cited prior arts teaches or suggests present combination of the substrate and the spacer group of claims 45 and 46. None of the cited prior arts teaches or suggests present SAM compound of claims 47 and 48. None of the cited prior arts discloses present domain sizes of claim 49 that exceed 10^5 nm^2 .

7. Claims 25-35 are allowed. None of the cited prior arts teaches or suggests present step of providing a SAM which is polymorphic having at least first and second structural forms and then thermally treating the SAM so as to change the SAM from its first structural form to the second structural form as presently required in claim 25.

Response to Arguments

8. Applicants argue that the process employed to produce the SAM as recited in present claim 36 produces a SAM having an increased structural perfection with significantly increased domain sizes and resistance to structural disruption by surface discontinuities and that no structure or function disclosed in Effenberger or Rozsnyai inherently possesses the properties of the SAM recited in present claim 36. Thus, applicants argue that Effenberger or Rozsnyai does not anticipate present claim 36.

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The Examiner disagrees. MPEP 2113 provides that once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. See In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983) (The claims were directed to a zeolite manufactured by mixing together various inorganic materials in solution and heating the resultant gel to form a crystalline metal silicate essentially free of alkali metal. The prior art described a process of making a zeolite which, after ion exchange to remove alkali metal, appeared to be “essentially free of alkali metal.” The court upheld the rejection *because the applicant had not come forward with any evidence that the prior art was not “essentially free of alkali metal” and therefore a different and unobvious product.*). It is the Examiner's position that applicants have not come forward with any evidence that the prior arts' SAM is structurally or physically different from that of present claim 36. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). Thus, in the absence of such evidence, present rejections over Effenberger and over Rozsnyai still stand.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sin J. Lee/
Primary Examiner, Art Unit 1795
August 16, 2010